Adm 12.6

DD/ST# 4581-68

ORD 7279-68

4 NOV 1968

MEMORANDUM FOR: Deputy Director for Science and Technology

SUBJECT : Interim Report on the CIS

1. The attached interim study is in response to your informal request of three weeks ago to evaluate the CIS from ORD's point of view. I made two explicit assumptions in carrying out this study.

a. There is an obvious need for a contract management system responsive to the needs of senior management.

b. This system, to the extent possible, should provide positive benefits to the contributing offices as well as to senior management.

2. As currently structured, the CIS has little, if any, value to ORD. A rather detailed review of the information flow to the CIS and other systems to which we contribute indicates why this situation exists. In general, there are three reasons:

a. It must be recognized that ORD's major interface with the CIS is as an information input to the system. Obviously, then, we already have the information which appears in the CIS output and, in general, our available information in ORD is more current.

b. There are reconciliation problems which result from an attempt to use the CIS as both a management system and as a financial records system. I am not sure that these two objectives can be met with the current system.

SUBJECT: Interim Report on the CIS

c. There are incompatibilities in the reporting system required for the CIS and those required for the budget and finance system and logistics reporting system. As a result, reports are out of synchrony, particularly in the CIS, which results in delay in the input to the CIS and more importantly brings in some degree of misinformation. In addition, there is some redundancy in reporting which, if corrected, could reduce the 1 1/2 man years which we estimate that we devote to the CIS.

3. Reporting to the CIS falls into five time phases as follows:

a. Initial Year Action
b. Quarterly Planning
c. Contract Initiation
d. Update, Add On, and Change
e. Contract Completion

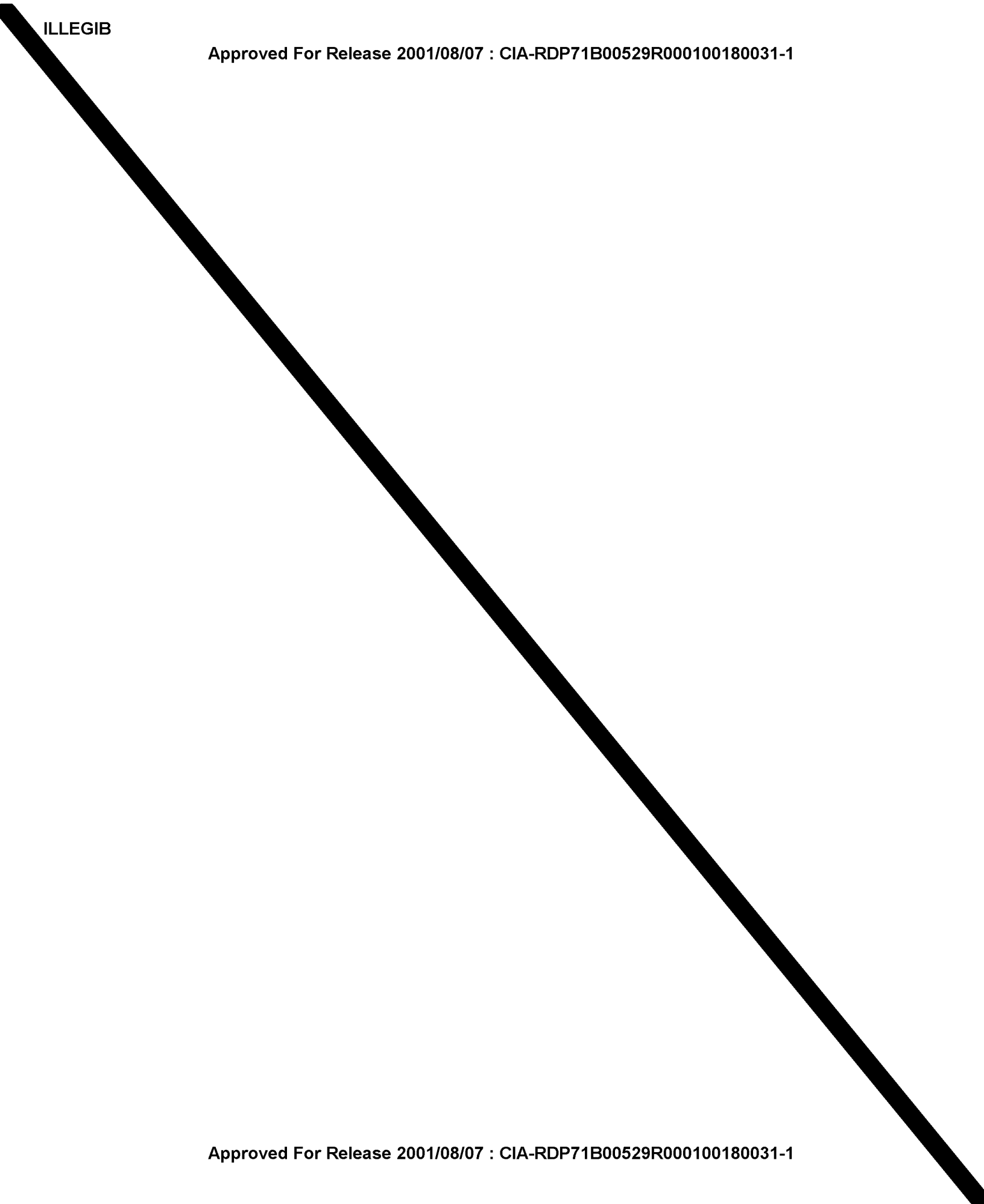
A schematic flow diagram of each of these reporting episodes is attached to the CIS report with comments and recommendations. We believe that these flow diagrams are reasonably correct, and they have been checked out with your staff.

4. The interim report is intended to be a constructive platform from which adjustments and improvements may be mutually arrived at. We have only addressed first-order problems and have not attempted to deal with the usual human errors and frailties which will always be present in any system but are basically not of great consequence. We would be happy to review this in more detail with you or your staff in an attempt to achieve the goals stated in the assumptions.

25X1A

[redacted]
Deputy Director
of
Research and Development

Attachment
CIS Interim Study



Approved For Release 2001/08/07 : CIA-RDP71B00529R000100180031-1

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ATTACHMENT TO ORD 7279-68

ATTACHMENT

OFFICE OF RESEARCH AND DEVELOPMENT

CIS REPORT

30 October 1968

Approved For Release 2001/08/07 : CIA-RDP71B00529R000100180031-1

ORD CIS REPORT

An analysis of the flow of information with regard to contract data is set forth in this report. First order effects are considered in the timing analysis. Human errors due to keypunching, etc. are felt to be second order and are not discussed.

Time phases that appear to be relevant and identifiable are dealt with in the following:

Attachments	Time Phase
1	General Environment of CIS
2	Initial Year Action
3	Quarterly Plan
4	Contract Initiation
5	Updating
6	Contract Completion

Problems and Recommendations

a. It appears that the actual de-facto timing on each individual flow chart is such as to present non-concurrent data relative to contract action. Lags are shown to be from 10 to 40 (or 85) days. Information presented as concurrent on an output sheet is actually spread over this time span.

b. Provision should be made to flag the various details that affect a contract report. Commentary would be indicated to "reduce the noise." This would be in pencil for the required computer modifications at a later date.

c. A study of information required by each group affected would probably result in report modification. This has been started per the enclosures. Nodal information is located where several inputs come in from widely dispersed origins. In some cases, the asynchronisms are as much as 90 days. Computer output commentary on

this would reduce the noise. This could initially be done in pencil for later computer modification.

d. The intrinsic contract work for actions could be included by keyword descriptors such that management guidance could be inserted for a second generation CIS.

e. Real time I/O should be considered (via terminals at each office).

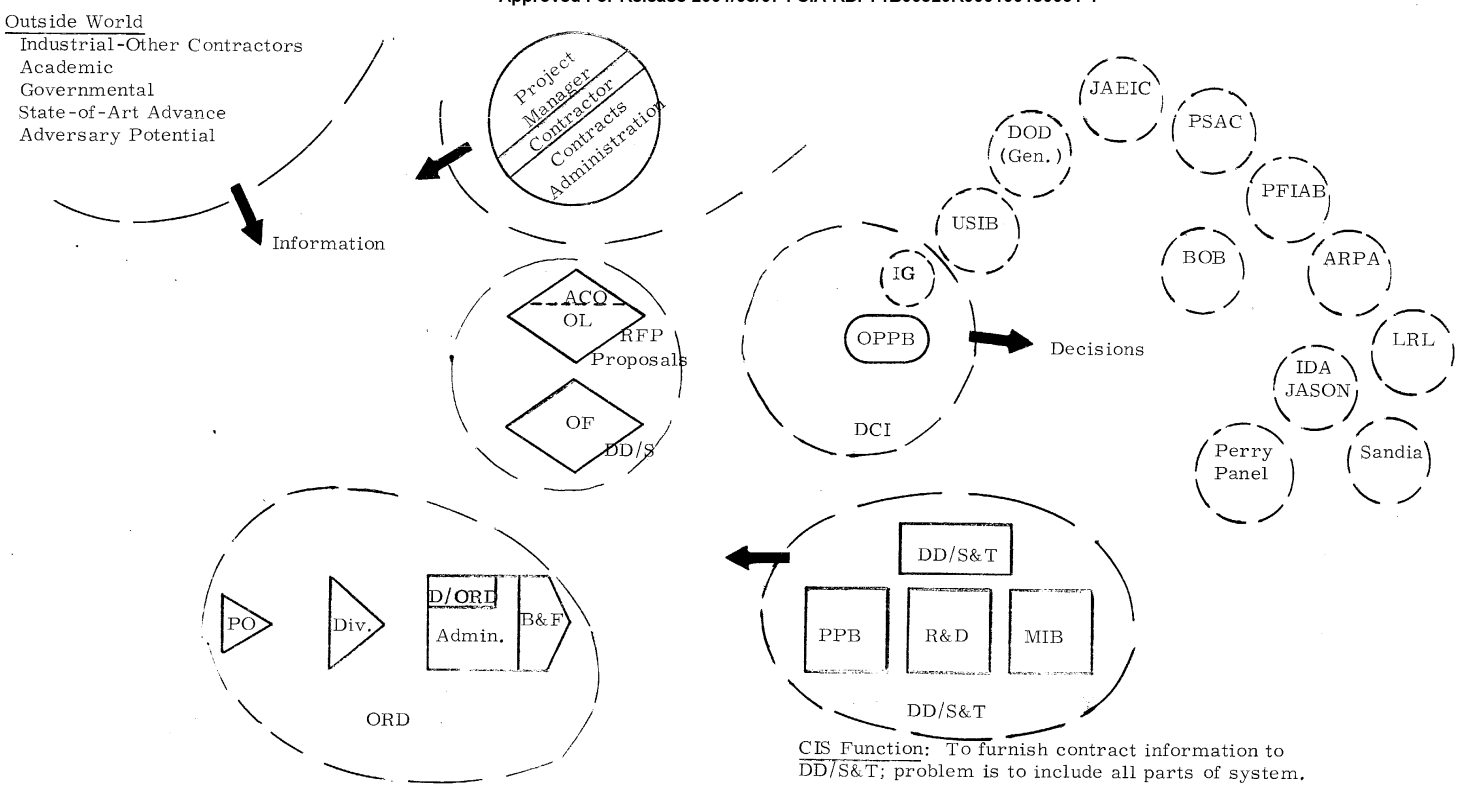
f. The system should be modified to permit use of consistent, Agency-wide number identification for more effective use.

Attachments
As Stated

Key to Abbreviations Used in Diagram Attachments

PO	Project officer
Div.	Division
D/ORD	Director of Research and Development
Admin.	Administrative Office/ORD
B&F	Budget & Fiscal Office/ORD
PPB	Plans & Programs Branch/DD/S&T
R&D	Research and Development
MIB	Management Information Branch/DD/S&T
ACO	Agency Contracting Officer
OL	Office of Logistics
OF	Office of Finance
OPPB	Office of Planning, Programming & Budgeting
IG	Inspector General
QC	Quality control
CRB	Contract Review Board
USIB	United States Intelligence Board
DOD	Department of Defense
JAEIC	Joint Atomic Energy Intelligence Committee
PSAC	President's Scientific Advisory Committee
PFIAB	President's Foreign Intelligence Advisory Board
BOB	Bureau of the Budget
ARPA	Advanced Research Projects Agency
LRL	Lawrence Radiation Laboratory
IDA JASON	Institute for Defense Analyses - JASON Panel

Groups Affecting CIS Operation



CIS Function: To furnish contract information to DD/S&T; problem is to include all parts of system.

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ATTACHMENT 1

DYNAMIC CHARACTER OF RD&E

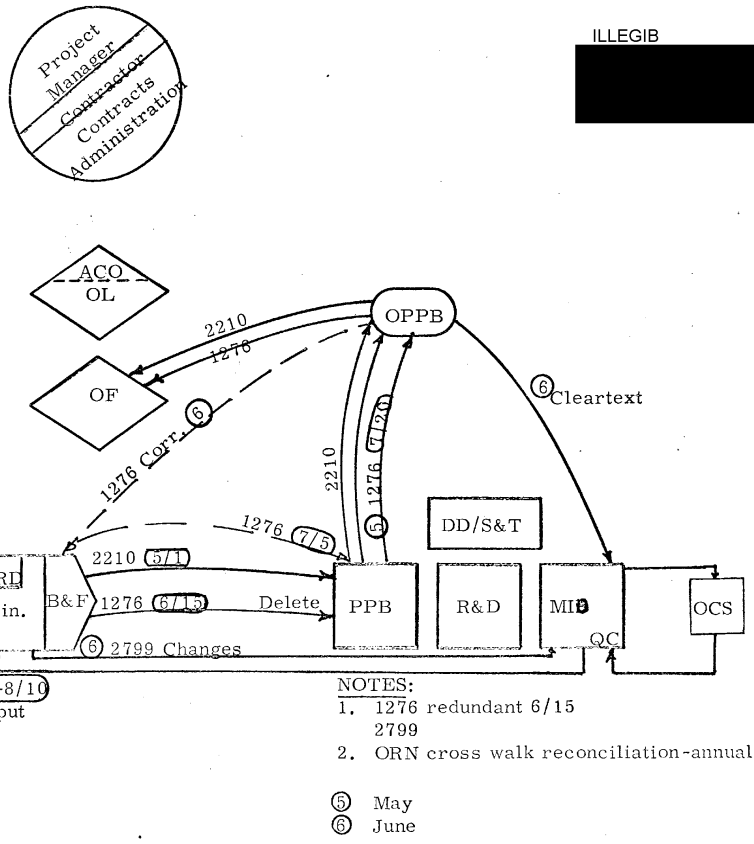
The block diagram shows the various groups which have a requirement for access to the CIS either as suppliers of information or users. They are as follows:

a. The outside world consisting of other contractors, the academic environment and governmental policy sources. The state-of-the-art is constantly being advanced; this affects actions on a continuing basis. Very important in this group is the assessment of the opposition. For example, state-of-the-art developments in ECM jamming, BW/CW and audio penetration can and should cause a quick response on the part of R&D to project planning in effort areas.

b. Changes from the "outside world" impinge continuously on DCI, BOB, DD/S&T and ORD. The block diagram shows the various groups of interacting organizations that affect information flow and ultimately contribute information albeit indirectly to the CIS. There are a host of advisory groups to whom ORD must be responsive such as the Perry Panel, IDA JASON and others.

Initial Year Action

Outside World
Industrial-Other Contractors
Academic
Governmental



NOTES:
1. 1276 redundant 6/15
   2799
2. ORN cross walk reconciliation-annual

⑤ May
⑥ June

ATTACHMENT 2

INITIAL YEAR ENTRY

The current year is chosen as an operating example for information flow. The Congressional budget for FY 1969 (beginning 1 July 1968) was prepared in August 1967.

a. The Form 1276 shopping list attached to this budget is the first input to the CIS of the FY 1969 budget (FY + 1).

b. The BOB changes occurred after the budget hearings (in October 1967) and the update of budget figures resulting from this review is received usually in late November or early December.

c. The Congressional hearings started in January 1968 and are still under review. The final mark for FY 1969 is contingent upon the result of this review and the subsequent action of the BOB (estimate November 1968).

d. After the Agency examination of the CPC, usually in April, a temporary operating allowance for FY 1969 is provided in order to begin business on 1 July 1968.

e. In November or December, the Congressional/ BOB actions should be completed and a final (?) FY 1969 operating budget is established.

The block diagram shows recent year's input of this to the CIS system. In early May, Form 2210's (Fan Data Classification Sheets) were prepared and forwarded to PPB/DD/S&T. These were then forwarded to OPPB as shown on the flow chart by the arrow upward.

It had been intended that the budget data would have been supplied from the Form 2799's (Computer Input Data Sheets); however, it was found necessary in mid-June to submit Form

1276 (Office Estimates-Schedule External Research Projects) indicating budget amounts for FY 1969. These were forwarded to OPPB for corrections and recycle through ORD and DD/S&T as shown by the dotted line from OPPB to B&F/ORD. In early June these were forwarded to PPB/DD/S&T; following a third review, the 1276's were forwarded to OPPB in mid-June as indicated by the loop. These data were furnished by OPPB to OF. In June the 2799's had been forwarded to supply initial year estimates. These were returned as printouts to Admin/ORD throughout the period 7/10 to 8/10.

It may be noted that the 1276's furnished in mid-June are redundant information to the system since the 2799's should furnish this information.

There is considerable confusion regarding generation of a crosswalk. There is an annual redefinition of Agency activities as defined in projects, elements and sub-categories. This requires an early reconciliation of past years' efforts into a new format with accompanying totals and subtotals. Complicating this breakout is the design problem with CIS, namely, that the ORN key is the basic entry part. A contractor engaged in the same continuous effort could have the following ORN's:

Contract Number*	FY	Contract Number**	Explanation
950-10	1967	7162-2015-201501	Initial Contract
950-10	1968	8162-3002-300201	Add On
950-10	1969	9162-2245-224502	Follow On

*This number is used by PO, OL, B&F, OF and the contractor.
**This number is unique to the CIS.

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OFFICE ESTIMATES SCHEDULE OF EXTERNAL RESEARCH PROJECTS	FISCAL YEAR

OFFICE

BUDGET PROJECT NUMBER AND TITLE	AMOUNT		
	ACTUAL FY	ESTIMATED FY	ESTIMATED FY

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FAN DATA CLASSIFICATION SHEET

See Instructions on Reverse

IDENTIFICATION	
	OFFICE OR STAFF
	FAN ACCT TITLE
	FAN ACCT NUMBER

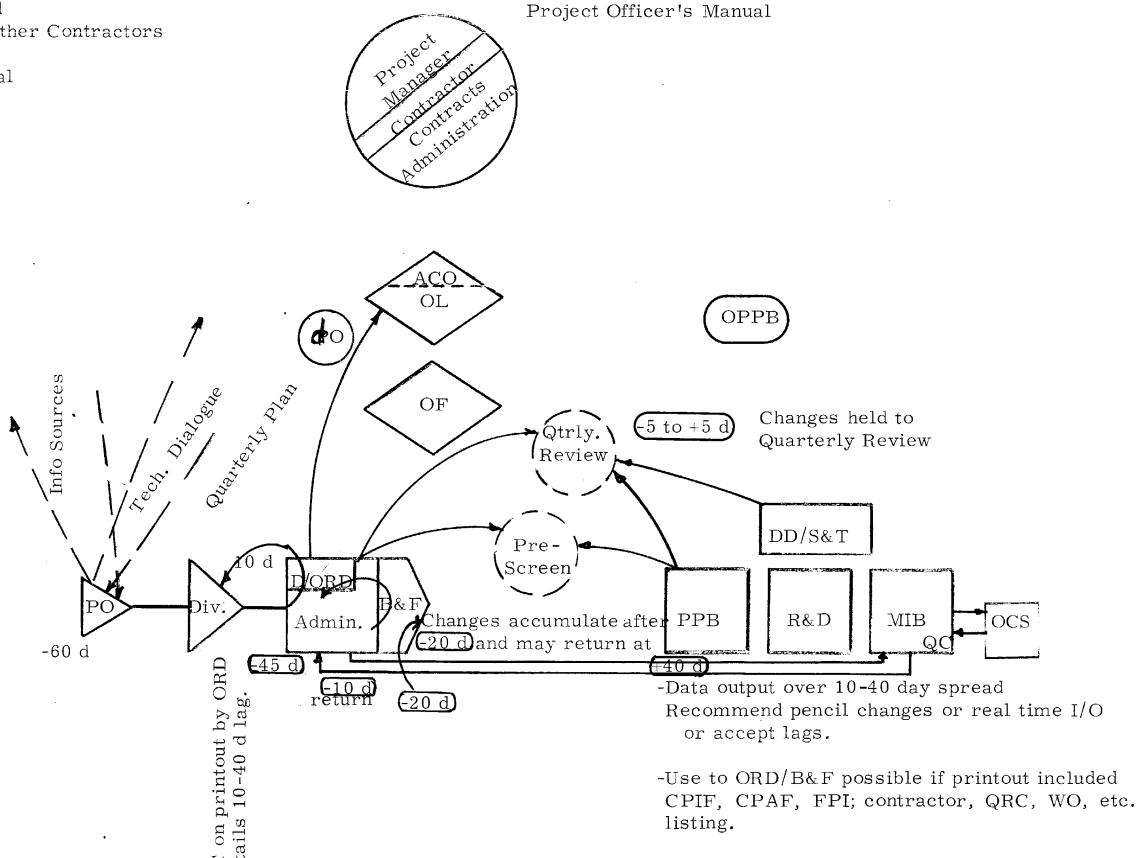
	NEW		REVISED		DELETE

PROGRAM DATA				OCS CODES	CLEAR TEXT
	ACTIVITY	CATEGORY			
		SUBCATEGORY			
		ELEMENT			
		SUBELEMENT			
	GEOGRAPHIC	BUDGET	AREA		
			COUNTRY		
		RESPONSIBLE STATION			
		TARGET	AREA		
			COUNTRY		

REVIEW AND APPROVAL		
	OFFICE OR STAFF	DATE
	DIRECTORATE	DATE
	PPB	DATE
OCS ACTION		DATE

Quarterly Planning
Supplemental to
Project Officer's Manual

Outside World
Industrial-Other Contractors
Academic
Governmental



QUARTERLY PLANNING

The diagram shows quarterly planning actions initiating with the project officer as a result of technical dialogue with from one to five contractors in addition to information received from other sources. The Division Chief integrates inputs from all sources and forwards the quarterly plans to Admin/ORD. This will be furnished, under present schedules, approximately 45 days before the start of the quarter. At this time, the plan undergoes an approximate 10-day recycle between ORD and the Division Chiefs for technical and budgetary review. The 1/12 limitations for the Office are adjusted at this time.

Approximately 30 days before the first of the quarter, a prescreening is held between PPB/DD/S&T and ORD in order to critique past quarters' actions and to prepare for the ensuing quarter's actions. The 1/12 limitation and other constraints are dealt with at this time.

About 20 days before the start of the quarter, the input sheets are forwarded to MIB/DD/S&T. Under the present arrangement, Admin/ORD assigns "Technical Field" and "Type of Work" to the CIS input.

About 10 days later, these are returned as computer printouts labeled "Quarterly Review" and "Quarterly Review Backup."

The DD/S&T review is scheduled approximately 5 days (-5 to +5) before the start of the quarter. Certain actions may be rejected or may be singled out for further review. Reprogramming is required for certain contract actions. Program over-allocations are either identified by the Divisions or compensated for by B&F/ORD at a later time in order to stay within budgetary limitations of monies available to each Division. B&F also maintains compliance with the 1/12 limitation and other constraints.

Following the review, return briefings are usually requested by DD/S&T on certain contract actions at which time the effort may be redirected or disapproved.

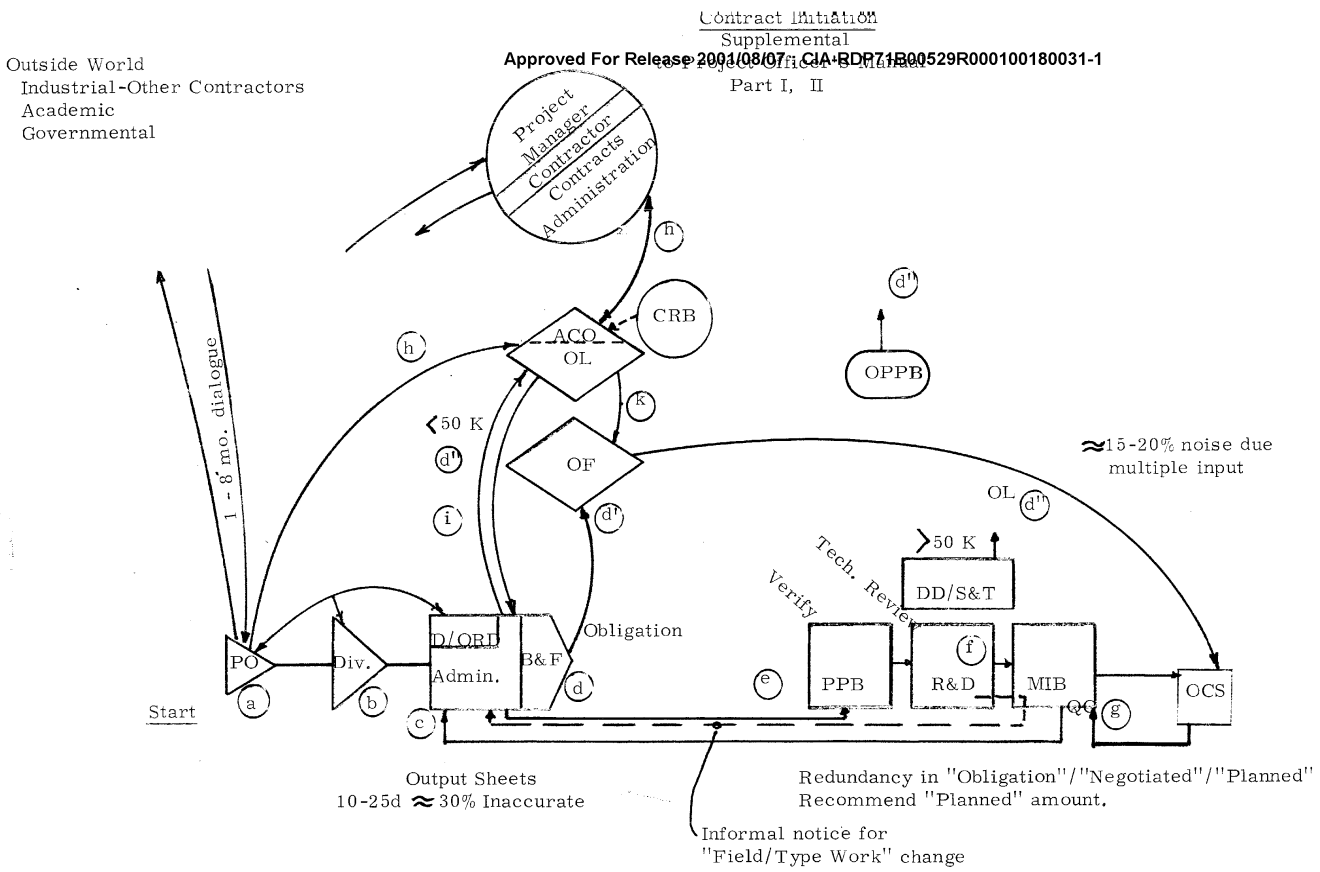
Accrued changes are entered following the review. These comprise departures from the quarterly plan as found on the printout; justification and separate review by DD/S&T are made on these.

The first quarter's performance was as follows:

a. 82 planned actions (77)
b. 55 executed
c. 42 planned but not executed
d. 19 unplanned actions were executed
e. Spending fell a million short of the planned goal.

OL is given planning estimates following the quarterly meeting with the caveat that the plan will probably change to some degree.

At this point in the CIS information flow for the first quarter, the ORN crosswalk reconciliation becomes effective. This particular phase, as well as the review phase, could be improved if penciled changes were permitted on the CIS output sheets. Since a 10 to 40 day lag period is in effect for the data, it is almost mandatory that a pencil update be made. This is because new action items are not reflected by the output sheets. Other alternatives are real time input/output or acceptance of the volatility of the data.



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ATTACHMENT 4

CONTRACT INITIATION

The period of time that it requires to generate an acceptable proposal is shown in Figure 4-1. The first curve (actions under 20 K) indicates that the most likely time to develop an acceptable technical program is about three months measured from the start of technical discussions to the receipt of the proposal from one of possibly several contractors. This includes the search for viable alternative and the evaluation of these for the best choice

Referring to the preceding flow diagram,

b. The Division Chief reviews the proposed contracts. He has been in touch with development of the action. His inputs to the action have been to interpret current technical decisions by the Perry Panel, TSD, FMSAC, OSI and by DD/S&T, OPPB, etc. and to reflect these in the proposed work on a continuing basis. This means that the original plan is in a state of flux dictated by essential technical-intelligence mutations.

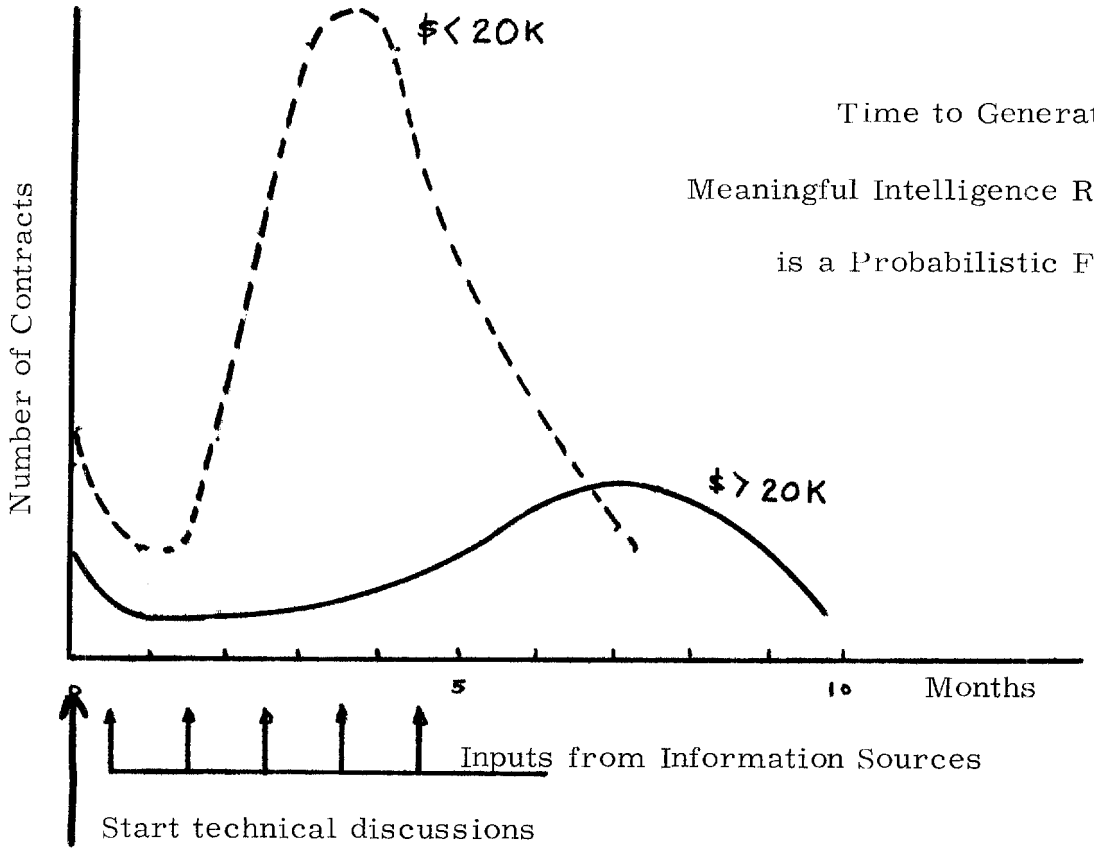
c. Admin/ORD uses the FAN/ORN number assigned by B&F for the input sheet. Usually dollar action differs from that proposed for the quarterly plan; also, the contractor, etc. may change. All of these changes will reflect the Division's and D/ORD's interpretation of current technical decisions made by higher management and by customers. D/ORD signs off on the proposed actions following a final ORD technical review.

d. B&F forwards the obligated (encumbered) amount to OF (d') which causes it to be entered on the FAN tape (d'').

e. PPB/DD/S&T reviews for program verification.

f. RD&E coordinator reviews for technical qualification.

g. MIB reviews for ADP-Q/C, punches and updates master file.



Time to Generate a Meaningful Intelligence R&D Proposal is a Probabilistic Function

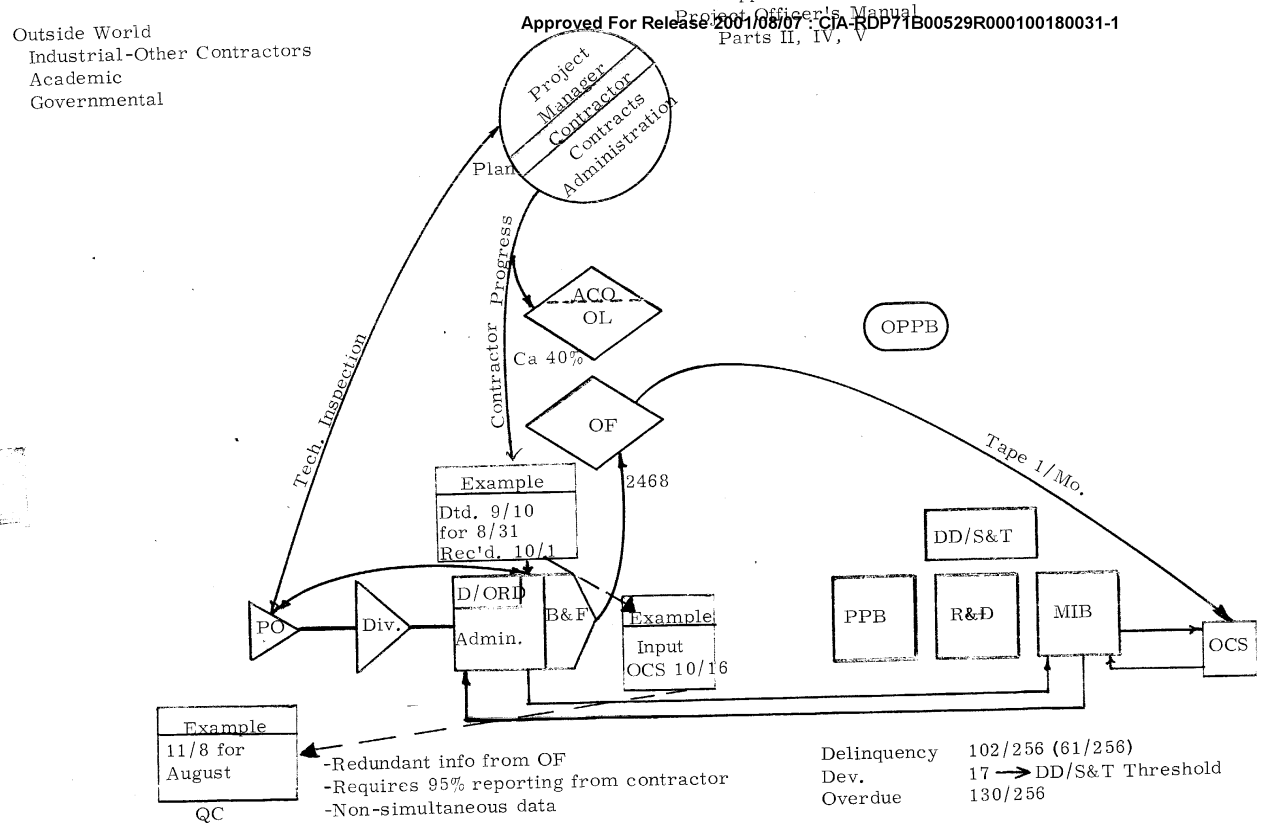
FIGURE 4-1

h. Contract negotiation proceeds with ACO/OL and the contract administrator for the contractor. The project officer may be called upon for technical details by OL.

i. ORD receives three copies of the negotiated contract (one for the project officer and two for Admin). B&F forwards the adjusted negotiated amount to OF on Form 2461.

k. When negotiations are complete, OF is given the original contract which has been signed by the contractor.

Supplemental to
Project Officer's Manual
Parts II, IV, V



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ATTACHMENT 5

UPDATING

The project officer generates a technical inspection report which goes to Admin/ORD via the Division Chief and on to MIB for a CIS run.

Contractor Plan Reports (see Figure 5-1) are generated monthly by the contractor. A fraction of these come to ORD directly. Although the number is increasing, it is believed that OL receives the same number.

Follow-ons, add-ons and other amendments must go through regular blue book procedure (see Contract Initiation).

The OF tape to OCS causes crosstalk for personal services contracts (or others paid incrementally) in that OF pays a partial amount on an outstanding contract. For example,

FAN	ORD CIS	$	OF from B&F Form 2468
9162	4913 04	2500	Pay 500 to 99 xx 10

The lack of simultaneity of the data will generally cause a mismatch.

The attached flow charts show expected lags in time on the various reporting figures for two cases:

Figure 5-2 (Case 1). Contract effective date (EDC) coincident with start of month.
- a. Top - ideal flow
- b. Bottom - "real world" expected flow due to lags in information.

Figure 5-3 (Case 2). Contract effective date (EDC) out of synchronism with start of month by two weeks.
- a. Top - ideal
- b. Bottom - "real world" expected flow due to lags.

Reports Timing for Various Normal Cases

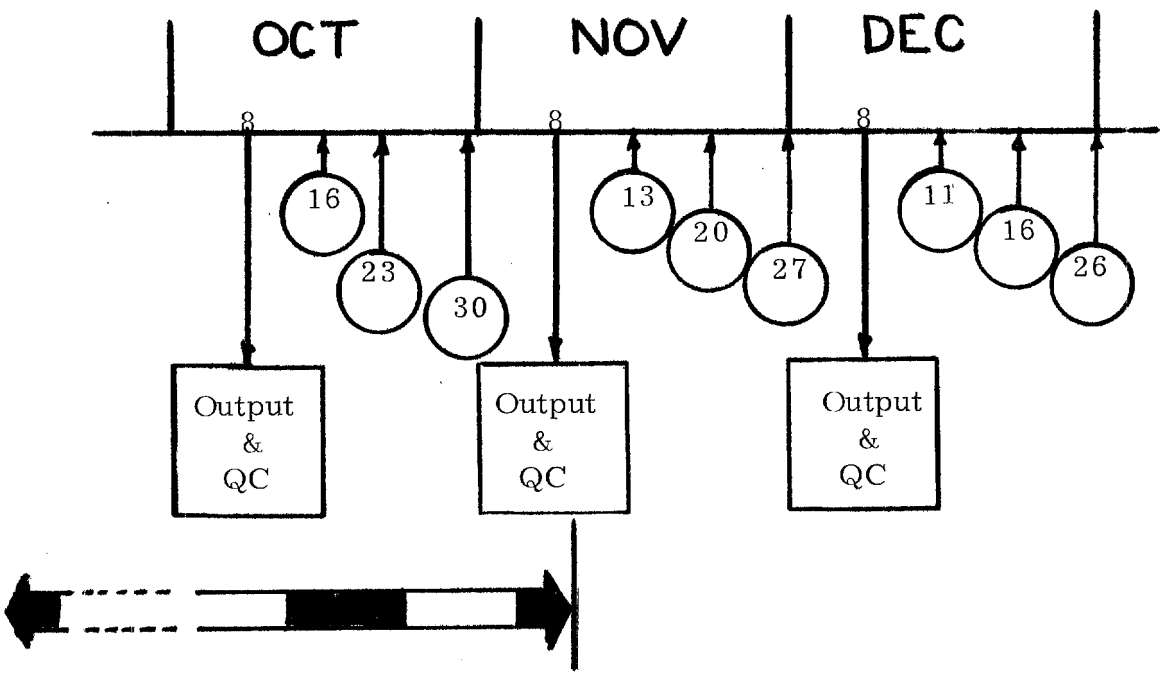
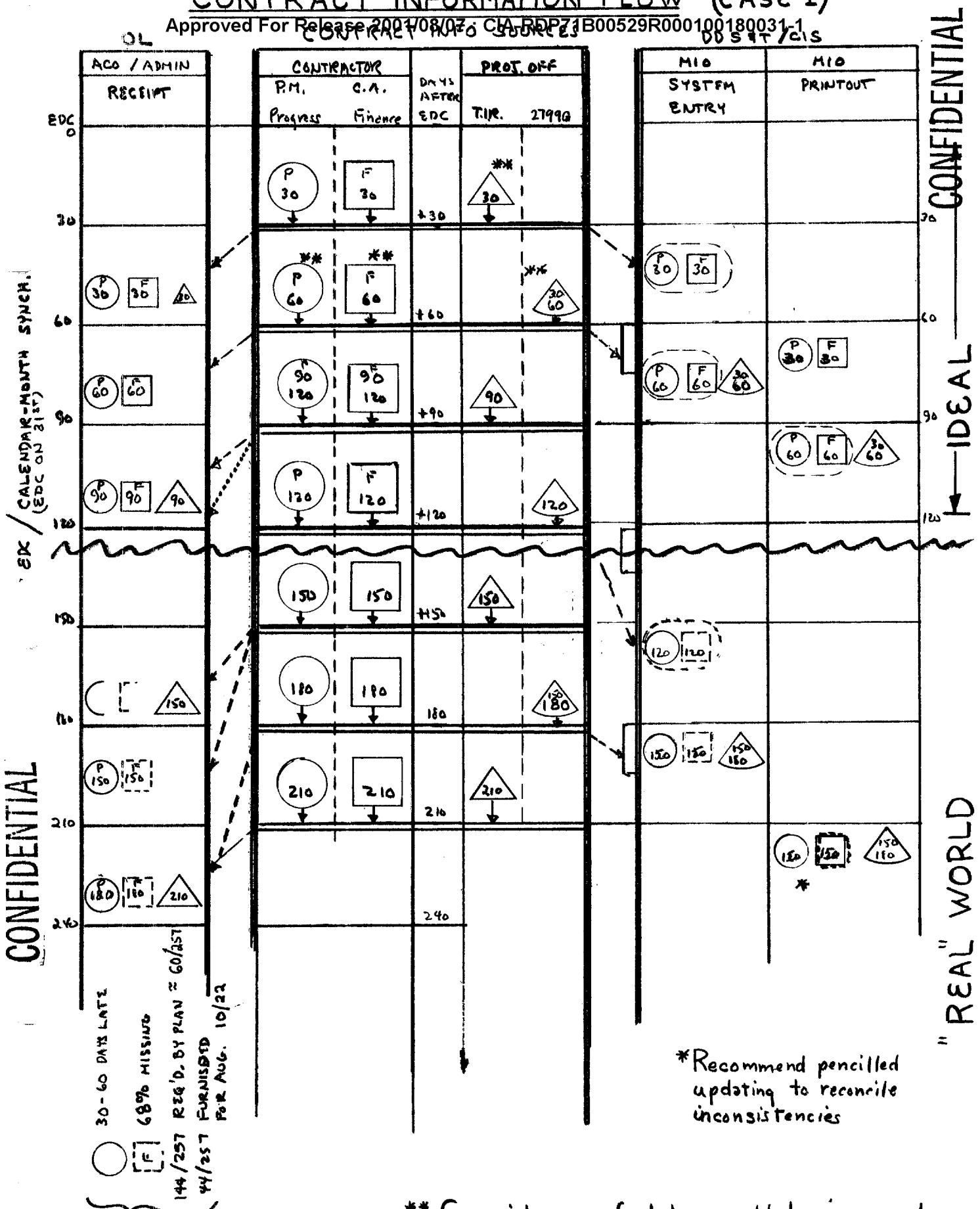
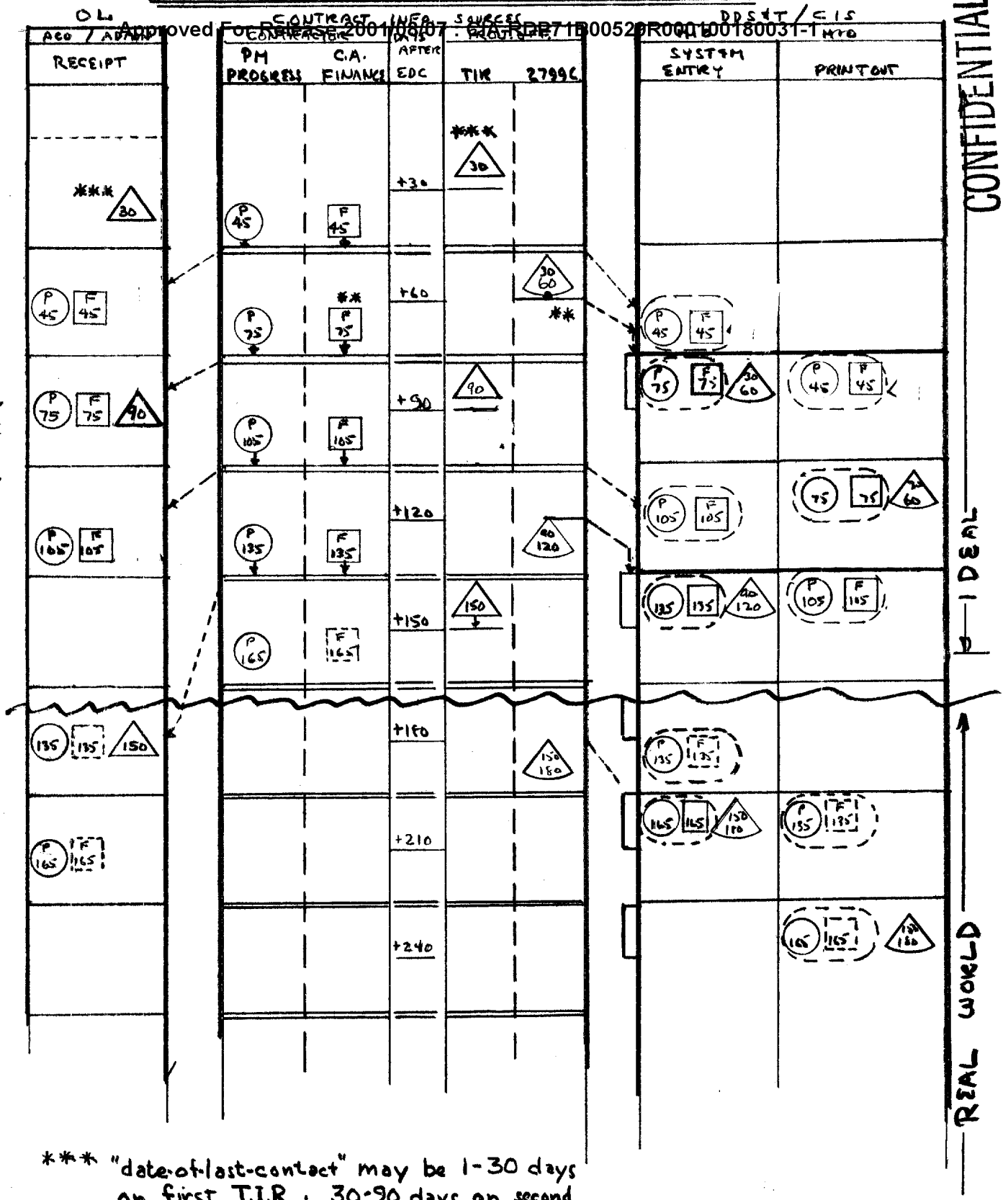


FIGURE 5-1

CONTRACT INFORMATION FLOW (CASE 1)



CONTRACT INFORMATION FLOW (CASE 2)



For retrieval or informational purposes, there is no way to sort on other key entries. The attached table (Figure 5-4) gives the various redundant numbers applicable to an action. There is no apparent way to reduce the plethora of numbers now utilized in all contract actions; the redundancy is necessary. For utility it would be recommended that all numbers enter the system. To eliminate multiple-source inputs (OF, B&F, etc.), it is recommended that CIS numbers all enter via Admin/ORD.

Other problem areas that are apparent are as follows:

a. Contract expenditure reporting problems arise when there is funding of two or more fiscal years and/or when two or more "items" are consolidated into the same contract. For example, contract 7415/08 (8162-200306 and 8162-200621) has an FY 1969 follow-on amendment (9162-214024). This shows that there are three "items" in the CIS for one contract. The reporting is relevant to the total amount obligated and not necessarily relevant to the different "phases." True, there are three phases of funding, but it is difficult in some, if not most, cases to differentiate expenditure relevant to the three "phases." This problem is more manifest when there is multi-divisional involvement in one contract.

b. If a contractor plan is inadvertently entered as "yes" into the CIS, the entire item has to be deleted from the system and re-entered in order to change the contractor's plan to equal "no."

c. The financial data input originates from B&F and is forwarded through OF to the CIS which creates a lag time that causes the true financial "picture" not to appear on some of the updated printouts. (The obligated amount of the contracts, as well as the budgeted and current programmed amounts of projects, are affected.)

d. For contracts management, one bi-weekly printout reflecting the ORN, contract number, contractor, project officer, obligated amount, technical type of work,

FIGURE 5-4 Table of Redundant Numbers on Single Actions

Assigned Number	Plan	Blue Book	Contract	PO Tech. Insp.	Contract Report	Billing
FAN/ORN	(CIS)	ORD				
Req. No.		ORD	OL (same as voucher)			
Contract			OL	ORD	Contractor	Contractor
CTR Voucher			(Same as Req.)			
Pymt. Voucher						OF

status, effective and scheduled completion dates would eliminate a large amount of markups and transposition which is required currently.

e. The CIS is set up to accept planned percentage of expenditures and percentage of work completion 31 to 60 days following the effective date of the contract when the contractor plan equals "yes." This, in some cases, leads to late receipt of contract reporting in ORD due to the contractor's consolidation and monthly reporting of expenditures for the month being sent in late. Also, in many cases, even when the contractor submits his report on time, this input is received in OCS too late to "hit" in time to be current. This lag in time creates the impression that the overdue reports are later than they actually are. This same problem is also reflected in the "Contractor Plan Deviation" report.

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OBLIGATION ABSTRACT

DATE

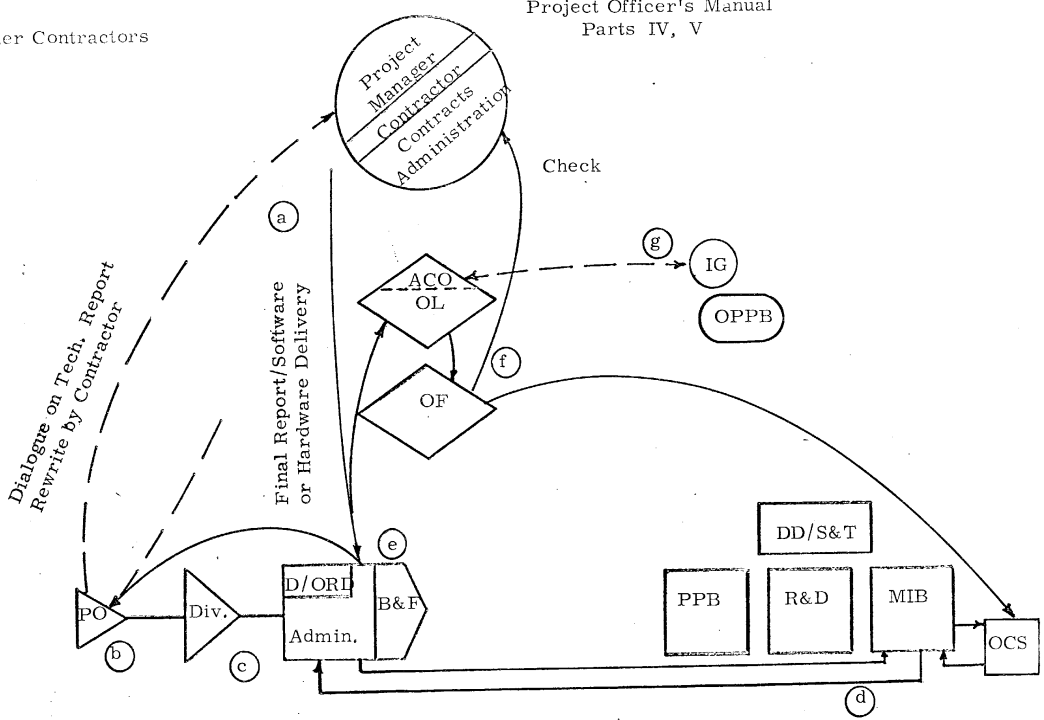
ABSTRACT NO.

13-33 DESCRIPTION		42-47 OBLIG. REF. NO.	48-49 SUB. NO.	55-62 FAN ACCOUNT SYMBOL	67-70 OBJECT CLASS	71-80 AMOUNT INCREASE	71 X	DECREASE

PREPARED BY	REVIEWED BY	TOTALS		

Completion of Contract
Project Officer's Manual
Parts IV, V

Outside World
Industrial-Other Contractors
Academic
Governmental



-QRC work orders overlap beyond 6/30 - annotate
-Dialogue over final delivery (and payment required for project officer - annotate
-Inherent system time lags result in 10-40 day delay in information.

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ATTACHMENT 6

5

CONTRACT COMPLETION

*a. Contractor generates final report (or hardware/software) and forwards to ORD. This must be reviewed and approved by the project officer for content.

b. There may be an ensuing dialogue with the contractor regarding missing pieces of the output. This causes a report delinquency and a failure of contractual commitment. A time extension at no cost to the government up to six months is generally no problem. Payment is withheld.

c. Many of the contracts listed in the "Contract Completion Status Report" are QRC-type contracts that "expire" on 30 June of the particular fiscal year in which they were let. However, many of the work orders under these QRC contracts are carried on after 30 June, providing that the work orders were let prior to 30 June and are therefore still "active."

d. Input sheets are forwarded to MIB for entry.

e. A report is written to OL for contract completion by the project officer. The project officer completes the report including rating of the contractor.

f. Contract is reviewed and paid by OF.

g. Contract may be audited several years following.

*The letters "a" through "g" correspond to the letters on the preceding diagram.